

Abstract

A laser source for generating amplified and filtered optical output, comprising a VCSEL, a power optical amplifier, and a filter. A laser source for generating amplified and filtered optical output, comprising a first mirror and a second mirror forming a cavity, an optical amplifier disposed in the cavity, and filter means for filtering ASE generated and amplified by the optical amplifier. A system for generating amplified and filtered optical output, comprising an optical platform having electrical connections and a fiber optic connection, a VCSEL configured to generate seed light, an optical amplifier configured to receive and amplify seed light to generate power boosted ASE and a filter configured to reduce background noise from the power boosted ASE. A method of generating optical output having high optical power with high spectral fidelity, comprising generating seed light, amplifying seed light, and filtering the amplified optical output to reduce background noise.

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